TOP SECRET

25X1

25X1

25X1

18 June 1968

Copy 1

NRO REVIEW COMPLETED

DECLASS REVIEW by NIMA/DOD

MEMORANDUM FOR THE RECORD

SUBJECT: KH-4B Program Information Meeting (PIM)

1. On 7-8 May 1968 a PIM was convened at the Advanced Projects (A/P) Office, Palo Alto, California. The purpose of this meeting was to provide a medium for information exchange among the developers and operators of the J-3 (KH-4B) payload and the various elements of the using community. It was not a problem-solving or decision-making meeting.

25X1

2. Those in attendance from NPIC were

25X1

25X1

25X1

A complete list of attendees is included as Attachment A to this memorandum.

25X1

3. reviewed the KH-4B camera system in general and discussed some of the plans for the future. Specific reviews of Missions 1101 and 1102 were presented along with the following recommendations.

a. Improvement of CORN target displays.

b. Focusing should be determined by dynamic resolution versus smear.

c. Investigate failure of edge trace analysis.

d. Predicted ground resolution for high priority list (HPL) targets should be correlated with target type.

e. Capability to disconnect instrument from 24 volts.

Plans for the future include introduction of second, third, and fourth generation lenses, film (SO-180), and color film (SO-121). For specifics of all

25X1

25X1

25X1

GROUP 1
Excluded from automatic downgrading and declassification

TOP SECRET

SUBJECT: KH-4B Program Information Meeting (PIM)

presentations refer to Attachment B which lists documents presented at the PIM meeting. These documents are on file in project folder 22626-8.

4. discussed their new method of PG calibration. The advantages are improved accuracy with decreased measuring effort. The obvious disadvantage is that terminal holes in the scan direction will not be calibrated. Mission 1104 will contain the nod dots to permit an in-flight nod to scan calibration. ACIC and ETL (Engineer Topographic Laboratories, Fort Belvoir, Virginia) commented on PG testing as it relates to their mapping mission. Generally they conclude that the mapping community has a potential of achieving an accuracy for generating mapping control considerably greater than presently obtained using frame materials alone. This conclusion is valid if preflight calibration is available and new calibration data reduction techniques are developed.

5. Presentation of UTB (Ultra Thin Base, SO-380) film distortion tests results by and ACIC led to the general conclusions that:

a. The printing operation is the largest contributor to distortion.

b. The distortion of UTB films are approximately 25 percent greater than STB films.

NPIC does not presently use any film distortion corrections in any of the KH-4B mensuration programs. However, some of the UTB distortion error vectors cause some concern over continued neglect of this distortion. UTB was included as a trailer on Mission 1103-2 and plans are to use it exclusively on an upcoming mission.

6. evaluation of the Data Block Reader established:

a. The device works well.

b. Three channels (main, stellar, index) for J-3 checked out.

[redacted] 25X1

SUBJECT: KH-4B Program Information Meeting (PIM)

c. Planning to implement DN (duplicate negative) as a "TI" copy on Mission 1103.

7. The tape recorders presenting in use in the KH-4B will be discontinued after Mission 1107. [redacted] of NPIC outlined the Center's use of the recorder data and the advantages provided by it. It was stressed that the tape recorder information had been well received at NPIC. 25X1

25X1 8. [redacted] camera representatives delivered their ideas on how to improve the performance of the DISIC subsystem. On the terrain this involved changing the system relative aperture to F/6.3. Additional baffling has been incorporated into the stellar camera to improve the imagery. [redacted] proposed a change in the DISIC binary word to indicate the appropriate mode; dependent or independent. [redacted] 25X1 25X1
replied that this was a relatively simple and inexpensive change [redacted] said the change was being considered and would probably be implemented. 25X1

25X1 9. [redacted] presented a feasibility study of changing the stereo angle of the panoramic cameras to twenty degrees. The advantage would be a small increase in resolution. The disadvantage is a loss in mensuration accuracy plus high redesign costs at [redacted] and at AP where all calibration equipment is designed for a thirty degree convergence system. There did not appear to be any support for this proposal. 25X1

25X1 10. [redacted] Company representatives reported that the dual gamma processor would be ready by July or August 1968. It was mentioned that SO-230 (higher speed black and white) does not respond to 3404 dual gamma chemistry as it is now formulated. In the granularity tests, it was reported that at high contrast 3404 was slightly better while at low contrast SO-230 was slightly better. [redacted] then put forth suggestions for titling J-3 color products. Present plans call for edge flashing to provide a clear edge for titling. This technique will necessarily interfere with some of the PG dot images. 25X1

11. The final presentation was primarily concerned with the programming of the [redacted] system, orbital maintenance, DMU (Drag Make UP) firings, and the Digital Shift Register Command System. 25X1

[redacted] 25X1

SUBJECT: KH-4B Program Information Meeting (PIM)

The purpose of the DMU system was stated as providing:

a. Correction capability for injection dispersions.

b. Period control to insure longitudinal synchronism between actual and nominal orbit at all latitudes.

c. Limited control of perigee over mission lifetime.

d. Oribt drag-life consistant with H timer and battery lifetimes for low altitude, low period orbits.

The purpose of the Digital Storage Register is to provide increased flexibility in pan camera target selection.

12. NPIC was able to clear-up one bit of confusion relating to bicolor photography. Some attendees received the mistaken impression that NPIC reported bicolor photography as being only slightly degraded. What NPIC had said was that there was some degradation in the black and white green filter record compared to the red filter record but there was a great deal of degradation in the bicolor system. ETL expressed considerable interest in bicolor, especially in being able to produce an ortho photograph for bicolor photography generation.

13. NPIC representatives in general were pleased with the meeting. We feel that at future PIM meetings TSSG should continue to be represented by at least one individual with a photo science background and one with a photogrammetric background.

[redacted] 25X1

Acting Chief, Photogrammetric Analysis Section
NPIC/TSSG/TAD

Attachments:
A - List of Attendees
B - Documents from PIM

25X1

TOP SECRET

25X1

25X1

25X1

SUBJECT: KH-4B Program Information Meeting (PIM)

Distribution:
cy 1 - NPIC/TSSG/TAD - 22626-8
2 - NPIC/TSSG/TAD - chrono 6/68

25X1 NPIC/TSSG/TAD: (18 June 1968)

25X1

TOP SECRET

25X1

25X1

Attachment B to
[redacted] 25X1

DOCUMENTS FROM PIM

CONTROL NUMBER	SUBJECT	ORIGINATOR
25X1 [redacted]	Agenda for PIM Meeting 7-8 May 1968	Resident Office
	Status of PG Calibration Data Reduction	ACIC
	CR-2 Test Evaluation	ETL/AMS
	J-3 Program Status	Resident Office
	Effect of UTB on DISIC Product	Resident Office
	DISIC Status Report [redacted] 25X1	
	a. J-3 Vehicle Disturbance b. Results of UTB Tests c. J-3 Data Display d. Stereo Angle Change to 20° e. The DMU System f. The DSR Command System and Supporting Computer Software	
None	Telemetry	
None	Data Block Reader [redacted] 25X1	
None	Dimensional Distortions in Aerial Duplicates	

25X1

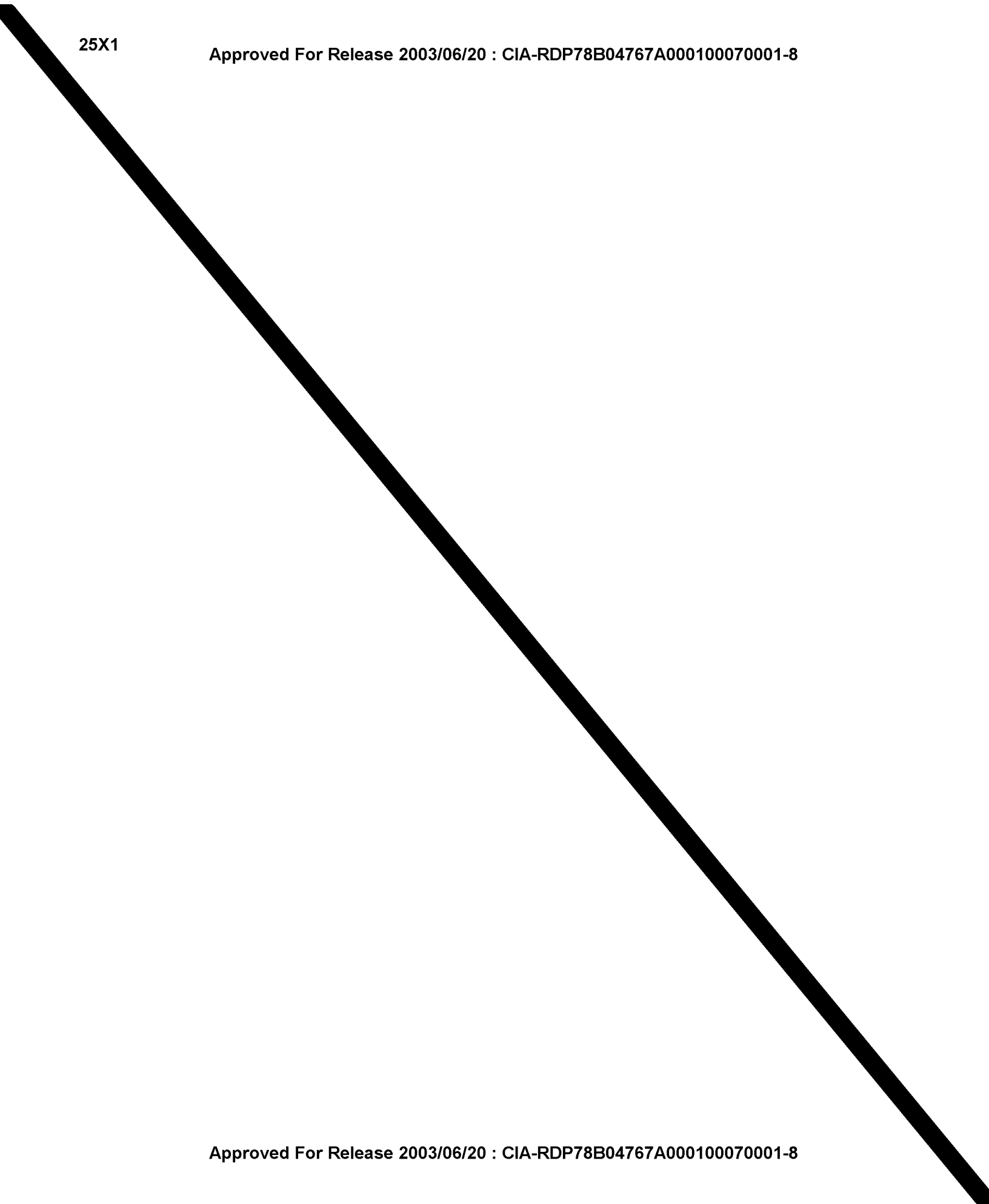
25X1 25X1

Attachment B to [redacted] 25X1

CONTROL NUMBER	SUBJECT	ORIGINATOR
25X1 [redacted]	J-3 Program a. J-3 Lens Configuration b. CR-1 Systems Analysis c. CR-2 Systems Analysis d. PG Calibration e. UTB f. Cross Track Error Due to Stereo Angle	[redacted] 25X1

25X1

25X1 [redacted]



Approved For Release 2003/06/20 : CIA-RDP78B04767A000100070001-8